A NEWLY MOUNTED SKELETON OF THE EXTINCT DIRE WOLF FROM THE PLEISTOCENE OF RANCHO LA BREA

By Chester Stock, John F. Lance and John O. Nigra

Introductory remarks: Eugene J. Fischer, veteran osteologist of the Los Angeles County Museum staff, recently completed the preparation of a second mounted skeleton of the dire wolf for the Museum exhibit collections (see Plate 8). The skeletal elements selected in the preparation of this specimen were larger than those of average size, although the completed skeleton is not the largest that can be constructed from fossil materials available in the Pleistocene asphalt.

Comparison with skeleton of modern gray wolf: Through the kindness of Dr. Remington Kellogg, Division of Mammals, U. S. National Museum, a photograph has been supplied of the side view of the skeleton of a gray or timber wolf. No. 3138, U.S.N.M. Coll. This specimen was collected at Yellowstone, Wyoming, in December 1856 by Lieutenant G. K. Warren. It has been identified as *Canis lupus irremotus* Goldman. No. 3138 represents an individual of average size. It is mounted with the back more strongly arched and with the shoulders somewhat lower than in the dire wolf skeleton. In Plate 9 the gray wolf skeleton is shown in outline,[1] while that of the Pleistocene dire wolf is reproduced in silhouette. Both specimens are drawn to the same scale. This brings out clearly the relative size and proportions of the extinct form in comparison with the modern wolf. The dire wolf, while not much taller than a present day wolf, was of sturdier build generally, with a particularly long and heavy skull, strong shoulders, deep chest, and massive pelvis. While the feet appear to be as large as those of *Canis lupus,* they are in proportion to the overall size of the dire wolf, somewhat shorter than in the present day species. The number of vertebrae in the tail of the dire wolf is not definitely known. In constructing this appendage Mr. Fischer was guided by the number of caudal vertebrae given for *Canis lupus* in Flower's Osteology. This number is 20. In the U. S. National Museum specimen, however, only 17 vertebrae appear to be present in the tail.

[1]In the drawing the position of the sternum is placed lower than in the mounted skeleton (in the latter its high position seems due to shrinkage of the cartilaginous connections with the ribs), with consequent greater display in lateral view of the costal cartilages. Moreover, no attempt is made to show the lesions present in the skeleton, particularly those of the left fibula and right tibia.

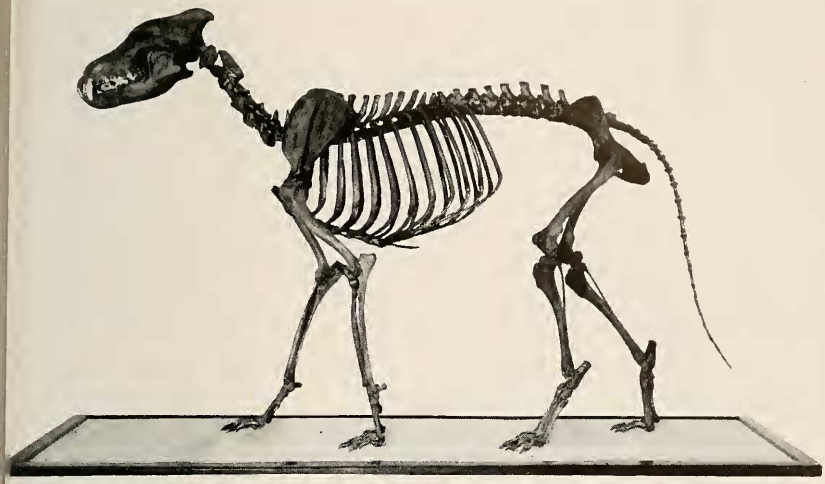

PLATE 8

Canis (*Aenocyon*) *dirus* Leidy. Skeleton as viewed from left side; approximately 1/14 natural size. Los Angeles County Museum collection; Rancho La Brea Pleistocene. Specimen prepared by E. J. Fischer.

Concluding remarks: In 1918 Merriam[2] established the genus *Aenocyon* as distinct from *Canis*, to include the three species, *dirus*, *milleri*, and *ayersi*. The characters given for the genus related exclusively to the skull and dentition, although Merriam stated that probably additional features would be found in the skeleton based on other material than that collected in the tar deposits of Rancho La Brea. Thus far, however, only the dire wolf from the latter locality is known by mounted skeletons. Furthermore, some doubt has been cast upon the validity of the species *Aenocyon milleri* from Rancho La Brea. Some authors have come to regard the dire wolf as not generically distinct from *Canis*. However, on the basis of the skull characters stated by Merriam and on the skeletal features given in the present paper it seems desirable to retain *Aenocyon* as of at least subgeneric rank. The common dire wolf of Rancho La Brea may then be known as *Canis* (*Aenocyon*) *dirus* Leidy.

[2]Merriam, J. C., Univ. Calif. Publ., Bull. Dept. Geol., vol. 10, no. 27, pp. 531-533, 1918.

Contribution No. 394,
Division of the Geological Sciences,
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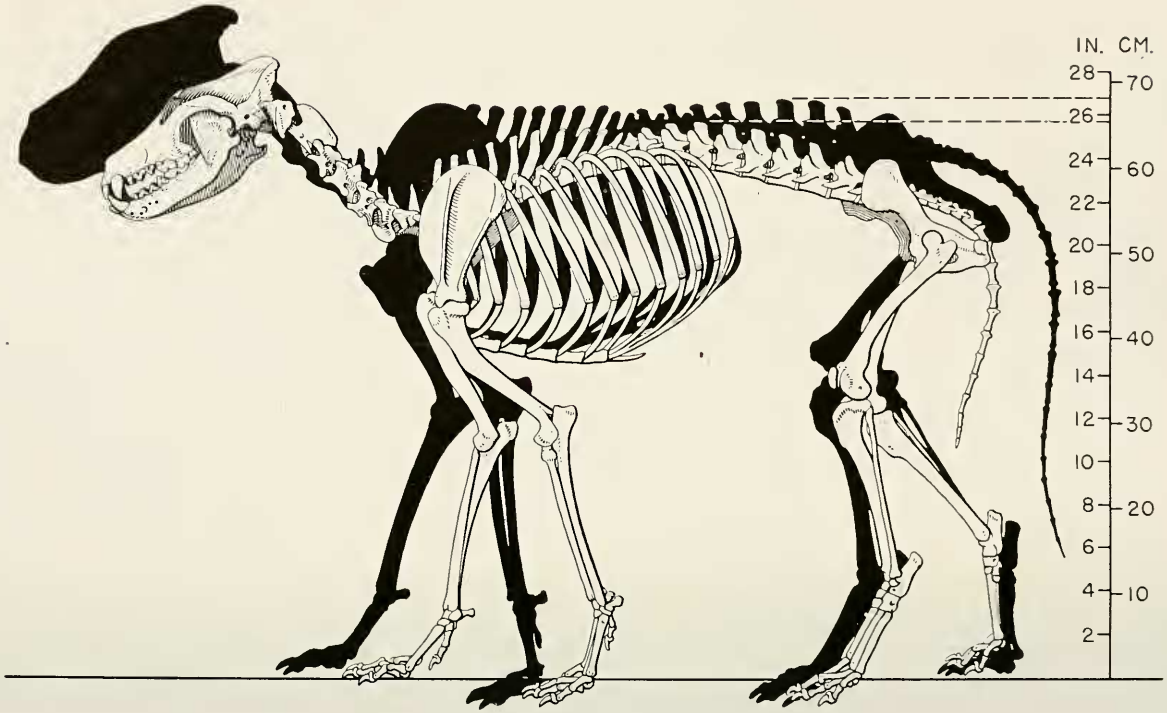

PLATE 9

Outline drawing of skeleton of modern gray wolf (*Canis lupus irremotus* Goldman), based on specimen 3138 U.S.N.M., and silhouette of skeleton of dire wolf (*Canis* (*Aenocyon*) *dirus* Leidy) from the Ranchero La Brea Pleistocene and in the Los Angeles County Museum collection showing characteristic differences.